

SUPPORTING DOCUMENT NO. 4

TECHNICAL REPORT

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

**ADDENDUM NO. 5 TO CLEANUP AND ABATEMENT
ORDER NO. 92-01**

FOR

**KINDER-MORGAN ENERGY PARTNERS, LP o/p SFPP, LP, POWERINE OIL
COMPANY, SANTA FE PACIFIC PIPELINE PARTNERS, LP, EXXONMOBIL OIL
CORPORATION**

**MISSION VALLEY TERMINAL
9950 & 9966 SAN DIEGO MISSION ROAD
SAN DIEGO, SAN DIEGO COUNTY**

TECHNICAL REPORT

APRIL 13, 2005

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

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To request copies of Addendum No. 5 to Cleanup and Abatement Order No. 92-05, for Kinder-Morgan Energy Partners, LP o/p SFPP, LP, Powerline Oil Company, Santa Fe Pacific Pipeline Partners, LP, ExxonMobil Oil Corporation, Mission Valley Terminal, 9950 & 9966 San Diego Mission Road, San Diego, San Diego County please contact Kelly Dorsey, Engineering Geologist at (858) 467-2980, kdorsey@waterboards.ca.gov.

Documents also are available at: <http://www.waterboards.ca.gov/sandiego>.

Technical Report:
Addendum No. 5, CAO No. 92-01
Mission Valley Terminal

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April 13, 2005

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**MISSION VALLEY TERMINAL
9950 & 9966 SAN DIEGO MISSION ROAD
SAN DIEGO, SAN DIEGO COUNTY**

Technical Report

Adopted by the
California Regional Water Quality Control Board
San Diego Region
on _____, 2005

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
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STATE OF CALIFORNIA

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The purpose of this Technical Report is to summarize information and technical analyses the Regional Board relied on in developing the findings and directives in Addendum No. 5 to Cleanup and Abatement Order 92-01 (Addendum).

BACKGROUND

As a result of historical petroleum storage and distribution operations, soils and groundwater in the vicinity of the Mission Valley Terminal have been impacted by accidental releases of petroleum liquids. While these leaks and spills originated on the Terminal property, the impacts to soil and groundwater extend off-site to the off-terminal property, including beneath the Qualcomm stadium and surrounding parking lots.

Cleanup and Abatement Order No. 92-01 (CAO) was adopted in January of 1992. The CAO was amended with Addenda Nos. 1-4, which were adopted in 1994, 1999, 2002, and 2002, respectively. The Dischargers named on the original CAO were Santa Fe Pacific Pipeline Partners, L.P., Shell Oil Company, Mobil Oil Corporation, and Powerline Oil Company. Addendum No. 2 added Kinder Morgan Energy Partners, L.P. operating partner of SFPP, L.P., and Equiva Services LLC (as owner of the Shell and Texaco storage tank facilities), to the CAO as dischargers. Addendum No. 3 removed Equiva Services LLC and Mobil Oil Corporation and added Texaco Refining and Marketing Inc., Equilon Enterprises LLC, and ExxonMobil Oil Corporation to the CAO as dischargers.

On March 13, 2002, the Regional Board adopted Time Schedule Order R9-2002-0042 requiring the Dischargers to propose milestone cleanup dates for the restoration of water quality in the off-property portion of the Mission San Diego Hydrologic subarea. The required milestone cleanup dates were provided to the Regional Board in the Dischargers' Final *Summary Report* dated January 30, 2004.

BASIS FOR FINDINGS AND DIRECTIVES

The findings and directives of the Addendum address new performance milestones for the off-site remediation system, final cleanup compliance dates for the off-property pollution, technical reports, revisions to the existing Corrective Action Plan (CAP), investigation workplans, and monitoring programs are based on information provided by the Dischargers and recommendations from the Regional Board technical consultants, Drs. Paul Johnson and Margaret Eggers. Drs. Johnson and Eggers have served as technical consultants to the Regional Board for the Mission Valley Terminal (MVT) cleanup since December 2003 pursuant to "Agreement Between the California Regional Water Quality Control Board, San Diego Region and Kinder-Morgan Energy Partners, L.P. o/p SFPP, Mobil Oil Corporation, Powerline Oil Company, Santa Fe Pacific Pipeline Partners, LP, Shell Oil Company, Texaco Refining and Marketing Inc., EQUILON Enterprises LLC, and EXXONMOBIL Oil Corporation."

They are both well-qualified experts in the field of groundwater pollution remediation. The final Johnson and Eggers' report, *Comments Regarding the Mission Valley Terminal Remediation Activities and Potential Cleanup Timeline*, provides the technical foundation for the directives and monitoring requirements in the Addendum. Drs. Johnson and Eggers performed a technical evaluation of the Dischargers' proposed off-property remediation system and made

recommendations to the Regional Board on how the following components should be addressed in the Addendum:

- A technically viable monitoring program to track the progress of groundwater cleanup,
- technically based performance metrics to measure and evaluate the effectiveness of cleanup of groundwater pollution in the off-property area, and
- technically based final cleanup compliance dates for the off-property pollution.

The Regional Board reviewed the report and concurs with the recommendations made by Drs. Johnson and Eggers.

The basis for the findings and directives included in the Addendum is provided below. The finding or directive is first stated in italics followed by an explanation of the Regional Board's basis for the finding or directive.

Findings:

Finding 5: *The milestone cleanup dates submitted by the Dischargers in the 2004 Final Summary Report are not aggressive enough to ~~protect and~~ restore the designated water quality needed to protect existing and anticipated future beneficial uses of the groundwater in a timely manner. The off-property pollution can be cleaned up ~~in a shorter time frame by the year 2013~~, if more aggressive cleanup methods are used.*

Basis: The Dischargers proposed the following cleanup dates for the off-property pollution:

- Cleanup of Off-Property Pollution to a Concentration that will not limit the City of San Diego's use of the groundwater – 10 to 29 years (MVT Summary Report, Table 1). The Final Summary Report includes soil vapor extraction (SVE) and groundwater dewatering as the proposed remedial alternative for cleanup and abatement of groundwater pollution in the off-property area of the site¹

According to Drs. Johnson and Eggers, "multiple lines-of-evidence suggest that a source zone remediation time frame of about five years is practicable if the SVE system performance is optimized."² "Source zone remediation" means removing the petroleum product trapped in the soil to the maximum extent possible with subsurface remediation techniques. Based on the cleanup date for the soil in the source zone, Drs. Johnson and Eggers suggested that the remaining dissolved petroleum product in the groundwater can

¹ The Final Summary Report (2004) is available at <http://www.waterboards.ca.gov/sandiego/misc/MVT/mvt.html>

² Johnson and Eggers Report, Page 5

be reduced to applicable drinking water standards within 8 years of running the optimized remediation system.³

The City of San Diego (City) Water Department has indicated to the Regional Board that they have plans to develop the aquifer downgradient of the MVT pollution. The City's *Mission Valley Groundwater Desalting Project* report calls for water production well construction and development in 4 years by 2009. Because of this planned use of the groundwater in the vicinity of the pollution, a more aggressive cleanup approach must be implemented and the existing groundwater pollution must be cleaned up in a shorter time frame than the dischargers have proposed.

Finding 6: *The groundwater pollution ~~associated with from~~ discharges at ~~and from~~ the MVT are continuing threats to water quality and must be investigated, monitored, contained, and cleaned up. A Quarterly Monitoring Program, a revised Corrective Action Plan, and further soil and groundwater investigations are needed to ~~measure the~~ document the Dischargers' progress toward containment and to adequately assess the effectiveness of cleanup of the pollution. Additionally, in order to address any new discharges of pollutants from the facility, the Dischargers must report all releases of pollutants from all systems that contain, store, and/or convey petroleum fuel products, wastes, liquids, or vapors. In addition to the investigation and monitoring requirements, more stringent spill reporting requirements are needed for MVT because releases from the tanks and associated petroleum fuel and waste conveyance systems are released directly to the soil and therefore, any release from these systems will be, or probably will be, discharged to the waters of the State.*

Basis: In order to ensure protection and restoration of groundwater beneficial uses, an aggressive groundwater remediation monitoring program is necessary for the Dischargers to document progress towards the cleanup milestone and compliance dates. The Monitoring and Reporting Program, Attachment 1 to the Addendum, is a comprehensive monitoring program that will help the Regional Board ensure that adequate progress is being made to achieve the cleanup dates in the Cleanup and Abatement Order (CAO) Addendum. The remediation monitoring program, recommended to the Regional Board by Drs. Johnson and Eggers, is designed to track the progress of the cleanup in a manner that will indicate when/if additional remediation methods are needed to meet the cleanup compliance dates established in the Addendum.

Finding 7: *The City of San Diego's (City) plans to ~~use-develop~~ the groundwater resources located downgradient of the ~~groundwater pollution from the MVT plume~~ for use as a municipal drinking water supply public drinking water by the year 2010, three years before even the most aggressive cleanup and abatement could be expected to reduce the concentration of waste constituents in the affected water body to levels consistent with water quality objectives for municipal supply. ~~In the event that~~ When the City builds and operates its proposed groundwater*

³ Johnson and Eggers Report, Page 16

development project, ~~Dischargers should have a Drinking Water Well Protection Contingency Plan to ensure protection of water quality for drinking water~~ water produced from the supply wells located downgradient of the discharger's pollution MVT plume may need to be treated to remove residual constituents, from discharges of petroleum hydrocarbon fuel waste at MVT, before the water can be used for drinking and municipal supply.

Basis: The Dischargers may be required to provide the Regional Board with a "Water Replacement Plan" under the authority of Water Code section 13304(h). The Drinking Water Well Protection Contingency Plan (Contingency Plan) is necessary to ensure that the City's water project is able to proceed as planned regardless of the progress made on cleanup and abatement of the existing off-property groundwater pollution. The required Contingency Plan will: 1) establish a groundwater monitoring network to monitor the pollution located directly upgradient of the City's production well(s); 2) Require implementation of an active interim cleanup method should the monitoring network indicate that the remaining pollution is threatening the quality of water produced from the City's well(s); and 3) include a plan to treat or replace the drinking water should the City's well(s) be impacted by the Dischargers' pollution. The tentative Addendum requires the Dischargers to provide the Regional Board with the Contingency Plan within 60 days of notification by the Regional Board that a drinking water production well will be installed in the vicinity of the MVT pollution.

Directives:

Directive 1: Texaco Refining and Marketing Inc., Equilon Enterprises LLC, and Shell Oil Company are hereby removed from the list of Dischargers identified in Cleanup and Abatement Order No. 92-01 and addenda thereto.

Basis: Shell requests that the Regional Board remove them as a responsible party from CAO 92-01 and all Addenda. Shell's request is supported by technical information gathered during site investigations at MVT. After reviewing the technical data, Regional Board staff conclude that there is sufficient evidence indicating that the discharges from the Shell properties are geographically or chemically distinguished from the main hydrocarbon plume migrating off the MVT property. Additionally, Shell cited arbitration and Superior Court rulings that found Kinder Morgan solely responsible for the cleanup of all of the current pollution at MVT. On the basis of these considerations, the Regional Board added Finding No. 2 and Directive No.1 to the Addendum.

The Regional Board will issue separate cleanup and abatement orders to Shell and Kinder Morgan requiring completion of cleanup and abatement of groundwater pollution caused by past discharges at the two Shell terminals to ensure that these smaller areas of pollution are cleaned up in a timely manner.

Directive 2: ~~By December 31, 2010, The Dischargers shall, as soon as practicable and no later than December 31, 2010 remove residual light non-aqueous phase petroleum liquid (LNAPL) from subsurface soil and ground water beyond MVT to the extent technically practicable. And;~~

Directive 3: ~~By December 31, 2013, The Dischargers shall, as soon as practicable and no later than December 31, 2013, reduce concentrations of dissolved phase petroleum hydrocarbon waste constituents in the off property pollution area to attain background water quality conditions. If cleanup to background water quality conditions is technologically or economically infeasible, the Dischargers shall propose alternative groundwater cleanup levels greater than background and provide the Regional Board with technical documentation supporting the alternative cleanup levels, including documentation that will allow the Regional Board to evaluate the proposed alternative cleanup levels in accordance with all the requisite considerations set forth in Title 23, Chapter 15, Article 5, Section 2550.4. Alternative cleanup levels shall be sufficiently stringent to ensure that all ground water in the affected water body will meet applicable water quality objectives needed to protect present and anticipated beneficial uses of waters, including both primary and secondary Maximum Contaminant Levels, and not result in water quality less than that prescribed in the to levels that are equal to or less than applicable water quality objectives pursuant to the Water Quality Control Plan, San Diego Region ("Basin Plan").~~

Basis: Drs. Johnson and Eggers have provided the Regional Board with recommended performance metrics and cleanup dates that take into account the nature, magnitude, and complexity of the groundwater pollution from the MVT. The recommended dates are technically feasible and will ensure progress towards cleanup and abatement of residual groundwater concentrations of pollutants that are equal to or less than the applicable water quality objectives established in the Regional Board Basin Plan. Drs. Johnson and Eggers have proposed the following cleanup time frames:

- Cleanup of Off-Property Liquid Petroleum Pollution (LNAPL) – 5 years (Johnson and Eggers Report, Page 6).
- Cleanup of Off-Property Dissolved Phase Petroleum Pollution – 8 Years (Johnson and Eggers Report, Page 16).

Previous cleanup dates in the MVT CAO were rescinded by previous CAO addenda because they were determined not to be technically feasible. The cleanup compliance dates specified in the Addendum are consistent with Drs. Johnson and Eggers recommendations on the cleanup time frames and can be achieved by the Dischargers.

Petroleum hydrocarbon pollutants include, but are not limited to, benzene, toluene, xylene, oxygenate additives (e.g., MTBE), total petroleum hydrocarbons, and degradation products (e.g. TBA), etc. "Background" means the concentrations or measures of constituents or indicator parameters in water or soil that have not been affected by waste constituents/pollutants from the Site.

State Water Resources Control Board Resolution No. 92-49 (*Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304*) is a state policy that establishes policies and procedures for investigation and cleanup and abatement of discharges under CWC Section 13304. The Resolution establishes the basis for determining cleanup levels of waters of the State and soils that impact waters of the State. Dischargers are required to clean up and abate the effects of discharges "in a manner that promotes attainment of either background water quality, or the best water quality which is reasonable if background levels of water quality cannot be restored." Alternative cleanup levels less stringent than background must, among other things, not unreasonably affect present and anticipated beneficial uses of waters of the State. The Resolution also includes procedures to investigate the nature and horizontal and vertical extent of a discharge and procedures to determine appropriate cleanup and abatement measures. Resolution No. 92-49 is consistent with CWC Sections 13000 and 13304.

By reference, State Water Board Resolution No. 92-49, section III.G, incorporates 23 CCR 2550.4 (c) which provides that the Regional Board may establish a cleanup level for a constituent of concern that is greater than the background value of that constituent only if the Regional Board finds that it is technologically or economically infeasible to achieve the background value for that constituent and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the cleanup level greater than background is not exceeded. In making this finding, the Regional Board must consider the factors specified in section 2550.4(d), results in site investigation reports, the updated Corrective Action Plan, a feasibility study required by this Order, monitoring data submitted by the Discharger(s) to support the proposed cleanup level greater than background, public testimony on the proposal, and any additional data or information. If the Dischargers propose alternative cleanup levels greater than background concentrations, they are must also provide the Regional Board with the necessary information to consider the required factors and support the requisite findings required by 23 CCR 2550.4.

Directive 4: By July 29, 2005, the Dischargers shall, as soon as practicable and no later than July 29, 2005, implement measures to prevent any further migration of petroleum hydrocarbon waste constituents at concentrations in excess of applicable water quality objectives pursuant to the Basin Plan in soil and ground water at the MVT property from migrating beyond the property limits of MVT. The Dischargers shall notify the Regional Board within 24 hours if if the on-property pollution waste constituents in soil or ground water at MVT appears to be migrating beyond MVT property limits, due to the failure or inadequacy of the existing containment system, the Dischargers shall notify the Regional Board within 24 hours of their determination and If petroleum hydrocarbon wastes at the MVT property appear to be migrating off-property, the Dischargers shall implement additional interim cleanup and abatement actions to achieve full containment of the on-property pollution immediately. The Dischargers shall provide written documentation on any additional interim cleanup and abatement actions to the Regional Board within 30-days of implementation of those actions.

Basis: The Dischargers have installed a property boundary groundwater extraction system that is intended to contain the on-property pollution and prevent further migration of the pollution to off-property areas. To ensure this system is containing the on-property pollution, it is necessary to have the dischargers operate the extraction system as proposed and notify the Regional Board of any changes to the operation of the system in a timely manner.

Directive 5: By September 9, 2005, the Dischargers shall, as soon as practicable and no later than September 9, 2005, provide the Regional Board with a technical report that contains the following minimum elements:

- a.) A synthesis of results from all previous investigations of the on-property discharge(s) of fuel-related pollutants petroleum hydrocarbon waste constituents from the MVT bulk fuel conveyance and storage operations at the MVT. This information shall also be used as a basis to develop and update a Site Conceptual Model (SCM) for pollution located within the MVT property boundaries of the MVT.
- b.) A feasibility study (FS) of to evaluate alternatives, including the cost and effectiveness of each alternative, to cleanup and abate the effects of the on-property from pollutants liquid, vapor and dissolve phase petroleum hydrocarbon waste constituents in soil and groundwater discharged from the operations at the MVT to attain background water quality conditions². If cleanup to background water quality conditions is technologically or economically infeasible, the Dischargers shall propose alternative groundwater cleanup levels greater than background and provide the Regional Board with their technical evaluation, including all the requisite considerations set forth in Title 23, Chapter 15, Article 5, Section 2550.4. Alternative cleanup levels shall be sufficiently stringent to ensure that all ground water in the affected water body will meet applicable water quality objectives needed to protect present and anticipated beneficial uses of waters, including both primary and secondary Maximum Contaminant Levels, and not result in water quality less than that prescribed in the Water Quality Control Plan, San Diego Region ("Basin Plan").
- c.) The feasibility study must clearly identify the Identification of Dischargers' preferred cleanup and abatement method(s), and any potential adverse impacts to the groundwater quality resulting from implementation of the proposed preferred method(s), upon the cleanup and abatement of waste beyond MVT.
- d.) A Proposed schedule for timely cleanup of residual petroleum waste constituents in soil and ground water on at the MVT property environmental pollution. The proposed cleanup method(s) must address liquid, vapor, and dissolved phase

~~petroleum hydrocarbon pollutants in the soil and groundwater.~~

- e.) *A monitoring and reporting program capable of assessing the effectiveness and progress of the Dischargers' cleanup and abatement at MVT.*

The Dischargers shall begin implementation of the preferred cleanup method described in Directive 4.c. as soon as practicable and no later than November 9, 2005 following submission of the Feasibility Study (FS), unless otherwise directed in writing by the Regional Board.

Basis: Directive 4 requires the Dischargers to evaluate remedial alternatives and propose a cleanup plan for the on-property pollution at MVT. The Addendum requires the Dischargers to contain the on-property pollution. However, to protect the designated beneficial uses of the groundwater, a plan to effectively cleanup and abate the on-property pollution must be developed and implemented. The required technical report will propose a cleanup plan for the on-property pollution and a program to monitor and report upon the progress of cleanup and abatement of on-property groundwater pollution. This directive also requires prompt implementation of the preferred cleanup method to ensure the Dischargers follow through with their on-property cleanup plans.

Directive 6: *The Dischargers shall submit a workplan, as soon as practicable and no later than July 13, 2005, submit a workplan that describe describing the findings of an investigation of the need for additional soil vapor extraction wells located in the off-property source zone, especially in the areas along San Diego Mission Road, the area west of RW-31, RW-32, and RW-33, and the area west of RW-3. This workplan must also include plans to evaluate the spatial density of the soil gas monitoring points and ensure adequate coverage has been achieved. Any additional vapor extraction wells proposed should be designed to maximize flow and be directed at deeper portion of target zone within the soils exposed by dewatering. The Dischargers must provide the workplan to the Regional Board by July 13, 2005.*

Basis: Directive 5 requires the Dischargers to submit a workplan to identify the inadequacies of the current soil remediation system. Drs. Johnson and Egger expressed concern regarding the coverage of the soil remediation system in their report (Johnson and Eggers, Pages 6-7). The information provided by the dischargers in the workplan will identify weaknesses in the remediation system and propose the necessary modification(s) to correct those weaknesses.

Directive 7: *The Dischargers shall, as soon as practicable and no later than July 29, 2005, conduct-submit a complete soil investigation report to defining e the horizontal and vertical extent of petroleum pollutants in the subsurface soils beyond MVT and provide a complete technical report to the Regional Board by July 29, 2005. Soil sampling should shall include analysis of total petroleum hydrocarbons (TPH), analysis, with a reporting of the TPH*

composition by carbon number ranges (e.g., % of TPH in <C4, C4-C6, etc. ranges) and results from leachability testing (using Synthetic Precipitation and Leaching Procedure – SPLP, EPA Method 1312) of soil core samples to provide establish remedial-soil cleanup levels that will be used to ensure improvements to groundwater pollution through time. ~~The Results~~ of this assessment should be combined with existing data from soil cores and CPT/LIF to verify the necessary drawdown of groundwater elevation needed to expose residual LNAPL in the soil. ~~By July 29, 2005, the Dischargers shall provide the Regional Board with a complete soil investigation report.~~

Basis: Directive 6 requires the Dischargers to conduct a soil investigation to define the extent of the LNAPL in the subsurface as well as collect a base line sample of the leaching potential of the LNAPL in the soil to the groundwater. The results of the investigation will be used to ensure the remediation and monitoring systems are properly constructed and operated.

Directive 8: The Dischargers shall, as soon as practicable and no later than September 9, 2005, revise and update or replace the existing Mission Valley Terminal MVT Site Conceptual Model (SCM) and Corrective Action Plan (CAP) (dated October 29, 1999) and submit it to the Regional Board. The updated revised and updated CAP must shall address the cleanup and abatement of off-property pollution located beyond MVT by including the following elements: and provide a comprehensive synthesis of results from investigations of current site conditions, selected cleanup methods, performance metrics, cleanup milestones, and all contingency plans required in this Order. CAO The Dischargers shall provide the Regional Board with a complete revised/replacement CAP and SCM in electronic and paper format by September 9, 2005.

Basis: Directive 7 requires that the Dischargers submit an updated Corrective Action Plan and an updated Site Conceptual Model. The current CAP was drafted in 1999 and it must be revised to include the performance metrics and compliance dates in the Addendum, recent improvements to the remediation system, and the current operation requirements for containment and cleanup of the pollution. There are currently two conflicting SCMs on file for the release of fuel pollutants from MVT, one submitted by KM and one submitted by Shell. Regional Board staff found that Shell's SCM was the most representative of the facts of the cleanup case. It is important that the Dischargers assemble one comprehensive SCM for the MVT pollution and cleanup project. The addition of the SCM requirement also addresses the City of San Diego's written comment asking for an updated SCM for MVT.

Directive 9: The Dischargers shall, within 60 days of notification by the Regional Board City (or any other individual or party) that a public or private water supply well has been installed downgradient of the Discharger's off-property pollution, must develop prepare and submit to the Regional Board, a Drinking Water Well Protection Water Replacement Contingency Plan (Contingency Plan) for the City of San Diego groundwater production water supply wells. This Contingency Plan must include all of the following minimum elements:

- a.) A plan for installation of a groundwater monitoring well network to detect pollution that could impact the groundwater production water supply wells.
- b.) A description of Active interim remediation methods that will be implemented should the in the event the monitoring network provide evidence that the off-property pollution could disrupt production of potable water supplies from the City's wells.
- c.) A plan to provide uninterrupted replacement water service, which may include treat (e.g., wellhead treatment) for the public water purveyor or private well owner, or replace the groundwater polluted by the discharger that would have been used for drinking water by the City.

~~The Regional Board must receive the Contingency Plan within 60 days of the Discharger being notified by the City (or any other individual or party) that a public water supply well has been installed downgradient of the discharger's pollution. The Discharger shall provide a copy of the written notice to the Regional Board within 10 calendar days of receipt from the City.~~

Basis: The Dischargers may be required to provide the Regional Board with a "Water Replacement Plan" under the authority of Water Code section 13304(h). Additional site-specific rationale for this Directive is provided in the basis statement for Finding No. 7 above.

Directive 11: The Dischargers shall notify the Regional Board report within 24 hours to the Regional Board, of all releases of petroleum hydrocarbon waste discharges to waters of the State product/liquid releases (regardless of volume released/discharged) from facilities, equipment, operations, or vehicles the tanks, sumps, and/or piping systems at the MVT. This includes releases all unauthorized and unintentional discharges from all tanks (permanent or temporary), all sumps, all product transfer pipelines (including incoming and outgoing intrastate pipelines carrying fuel in the MVT area), all tanks and piping systems containing fuel additives, and all water-draw pipelines, all product transfer operations, and all vehicles. The report shall include the date, time and location of the release, the type of all petroleum hydrocarbon waste discharged product/liquid released, and the cause/circumstances of the release-discharge if known. The Dischargers shall provide a written report within five days of the initial notification. The Dischargers shall also notify the Office of Emergency Services, the County of San Diego Hazardous Materials Division, and any other agencies that require release reporting, as soon as they have knowledge of a release.

Basis: The proposed spill reporting requirements in the tentative addendum are more stringent than the current statutory reporting requirements but only regarding spill reporting to the Regional Board. In order to protect the designated beneficial uses of the groundwater, the tentative addendum includes more stringent spill requirements for reporting to the Regional Board. The spill reporting requirements in the order are

reasonable and protective of the waters of the State. Spill reporting for OES and NRC are still in effect according to the Statute and any additional requirements of those agencies'.

Provisions:

Provision 1: *Duty to Comply - The Discharger(s) shall properly manage handle, store, treat, and/or dispose of soils and ground water that contain waste constituents in accordance with applicable federal, state, and local laws and regulations. The handling, storage, treatment, or disposal of soil, sediment, and groundwater containing waste constituents shall not create conditions of pollution, contamination or nuisance as defined in California Water Code section 13050(m). The Discharger(s) shall, as required by the Regional Board, obtain, or apply for coverage under, waste discharge requirements or a conditional waiver of waste discharge requirements, for the removal of waste from the immediate place of release and for any discharge of the waste to (a) land for treatment, storage, or disposal or (b) waters of the state.*

Basis: Discharger implementation of cleanup and abatement alternatives that entail discharge of residual wastes to waters of the state, discharges to regulated waste management units, or leaving wastes in place, create additional regulatory constraints and long-term liability. Improper waste management procedures may create a condition of pollution or exacerbate an existing condition of pollution or nuisance. All waste management and disposal methods must be consistent with Federal, State and local requirements, including obtaining any permits that may be required to accomplish the various tasks associated with compliance with this Order, addenda, and attachments thereto. The Dischargers must ensure they comply with the directives of this Order and all remedial actions must comply with the applicable regulatory requirements for managing and disposing of wastes that are generated during the cleanup and abate groundwater pollution.

Provision 2: *Duty to Operate and Maintain: The Discharger(s) shall, at all times, properly operate and maintain all facilities and systems of treatment, control, storage, disposal and monitoring (and related appurtenances) which are installed or used by the Discharger(s) to achieve compliance with this Cleanup and Abatement Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities, which are installed by the Discharger(s) only when the operation is necessary to achieve compliance the conditions of this Cleanup and Abatement Order.*

Basis: Inconsistent operations of the offsite remedial systems by the Dischargers have been a problem in the past. The Dischargers must properly operate and maintain remedial

systems to ensure the timely cleanup and abate groundwater pollution and removal of petroleum waste constituents from soil in the off-property area of the site.

Provision 3: Duty to Submit Other Information: *When the Discharger(s) becomes aware that it failed to submit any relevant facts in any report required under this Cleanup and Abatement Order, or submitted incorrect information in any such report, the Discharger(s) shall promptly submit such facts or information to the Regional Board.*

Basis: The purpose of this provision is to mandate that the Dischargers 1) report all relevant facts in reports required under the CAO; and 2) identify and correct any incorrect information submitted in previous technical reports to the Regional Board. Reports submitted to the Regional Board must be complete and accurate so that the Regional Board can adequately consider and weigh factors such as the nature and horizontal and vertical extent of the discharge; discharger progress in implementing cleanup and abatement measures; and other analysis of site-specific data. Failure to comply with this provision will constitute a violation of the CAO and Water Code section 13267 and may subject the Dischargers to further enforcement actions by the Regional Board

Notifications:

Notification 1: Enforcement Discretion --*The Regional Board reserves its right to take any enforcement action authorized by law for violations of the terms and conditions of this Cleanup and Abatement Order.*

Basis: The California Water Code authorizes the Regional Board to take a range of enforcement actions in response to violations of this CAO. The State Water Resources Control Board's *Water Quality Enforcement Policy* provides that cleanup and abatement orders shall contain language specifying that the Regional Board reserves its right to take any enforcement action authorized by law for noncompliance with the cleanup and abatement order. Notification 1 addresses this requirement.

Notification 2: Enforcement Notification--*The California Water Code commencing with Chapter 5, Enforcement and Implementation, Section 13308, provides that if there is a threatened or continuing violation of a cleanup and abatement order, the Regional Board may issue a Time Schedule Order prescribing a civil penalty in an amount not to exceed \$10,000 per day for each day compliance is not achieved in accordance with that time schedule. Section 13350 provides that any person may be assessed administrative civil liability by the Regional Board for violating a cleanup and abatement order in an amount not to exceed \$5,000 for each day the violation occurs, or on a per gallon basis, not to exceed \$10 for each gallon of waste discharged. Alternatively the court may impose civil liability in an amount not to exceed \$15,000 for each day the violation occurs, or on a per gallon basis, not to exceed \$20 for each gallon of waste discharged. Section 13385 provides that any person may be assessed administrative civil liability by the Regional Board for violating a cleanup and abatement order for an activity*

subject to regulation under Chapter 5.5, commencing with Section 13370, of Division 7 of the California Water Code, in an amount not to exceed the sum of both of the following: (1) \$10,000 for each day in which the violation occurs.; and (2) where there is a discharge, any portion of which is not susceptible to cleanup or is not cleaned up, and the volume discharged but not cleaned up exceeds 1,000 gallons, an additional liability not to exceed \$10 multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons. Alternatively the civil liability may be imposed by the court in an amount not to exceed the sum of both of the following: (1) \$25,000 for each day in which the violation occurs; and (2) where there is a discharge, any portion of which is not susceptible to cleanup or is not cleaned up, and the volume discharged but not cleaned up exceeds 1,000 gallons, an additional liability not to exceed \$25 multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.

Basis: Violations of cleanup and abatement orders should trigger further enforcement in the form of an Administrative Civil liability Order, a Time Schedule Order (TSO) under California Water Code section 13308, or referral to the Attorney General for injunctive relief or monetary remedies. The State Water Resources Control Board's *Water Quality Enforcement Policy* provides that cleanup and abatement orders shall contain language describing likely enforcement options available for non-compliance and appropriate California Water Code citations. Notification 2 of the Addendum addresses this requirement and identifies several enforcement actions that the Regional Board could take if the Dischargers 1) fail to comply with the Directives of the Cleanup and Abatement Order and Addenda; 2) take actions creating conditions that violate existing surface water discharge requirements; or 3) take actions creating conditions that violate the requirements or prohibitions of applicable State or Regional Water Quality Control Plans.

LIST OF REFERENCE DOCUMENTS

The following documents are included in the Regional Board file and form the basis for Addendum No. 5 to CAO 92-01:

- A. San Diego RWQCB's Order Nos. 92-01 and Addenda (EOSR Supporting Document No. 6) and Time Schedule Order R9-2002-0042 for Mission Valley Terminal (available on the Regional Board web page at: <http://www.waterboards.ca.gov/sandiego/orders/orders-02.html>).
- B. Final Summary Report Time Schedule Order R9-2002-0042, Prepared by LFR Levine-Fricke for SFPP, L.P., Operating Partner of Kinder Morgan Energy Partners, L.P. (available on the Regional Board web page at: <http://www.waterboards.ca.gov/sandiego/misc/MVT/mvt.html>).
- C. Comments regarding the Mission Valley Terminal Remediation Activities and Potential Cleanup Timeline, Prepared by Dr. Paul C. Johnson, Arizona State University and Dr.

Margaret R. Eggers, Eggers Environmental, Inc. January 7, 2005 (see EOSR Supporting Document No. 4).